

CVM NET

Three-phase power analyzer (balanced and unbalanced) for DIN rail mounting - without display



Description

CVM NET is a Power Analyzer for measuring balanced and unbalanced three-phase networks specifically designed for measuring up to 230 electrical parameters and transmission of this data through RS-485 communication bus with Modbus/RTU protocol to supervision SCADA.

Its main features are:

- DIN rail format of just 3 modules
- 72 x 72 mm panel assembly, with front panel adapter
- Current reading using external transformers ... / 5*
- Possibility of measuring medium and low voltage systems
- Communication RS-485 (Modbus RTU)
- Compatible with PowerStudio / PSS / PSSDeluxe software
- 2 programmable digital outputs
- Universal power supply:

*... / 250 mA in **MC** model

Application

- Application for the control of switchboards and low and medium voltage connection points, where an analyzer must be installed on the DIN rail due to space restrictions.
- Control of instantaneous, maximum and minimum values of the electrical parameters metered.

Features

Power circuit	
Nominal voltage	230 V _{AC}
Power supply frequency	50 - 60 Hz
Maximum power consumption	3.0 V·A
Measurement circuit	
Nominal voltage	300 V _{AC} / 520 V _{AC}
Frequency	45 - 65 Hz
Nominal current	I _n / 5 A or / 250 mA
Overload (permanent)	
Communications	
Network protocol	RS-485 (A / B / C)
Communications protocol	Modbus / RTU
Speed	1200 / 2400 / 4800 / 9600 / 19200 bps
Length	8
Parity	No parity / even / odd
Bits of parity	1 / 2
Output transistors	
Type: Isolated transistor	Open NPN collector
Maximum voltage of operation	24 V _{DC}
Maximum current of operation	50 mA
Maximum frequency	5 imp/s
Impulse duration	100 ms
Build features	
Metering module	Assembly on DIN rail 46277 (EN 50022)
Number of modules	3
Environmental conditions	
Operating temperature	-10 – +50°C
Protection degree	IP
Humidity (without condensation)	5 – 95% (without condensation)
Maximum altitude	2000 m
Safety	
Type of insulation	EN 61010 double-insulated electric shock protection class II
Standards	
IEC 664, VDE 0110, UL 94, IEC 801, IEC 348, IEC 571-1, EN 61000-6-3, EN 61000-6-1, EN 61010-1, EN 61000-4-11, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN-61000-4-5, EN 55011, CE	

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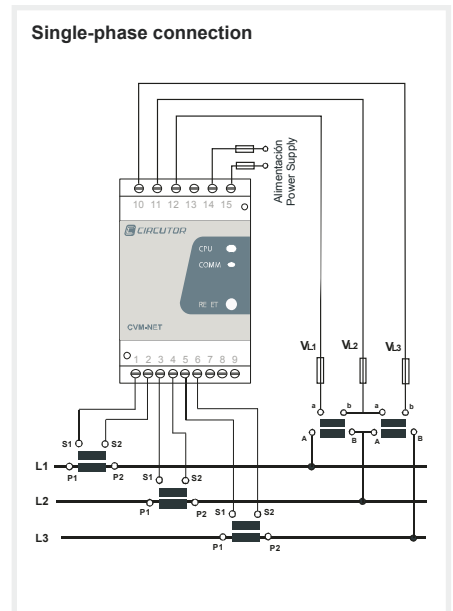
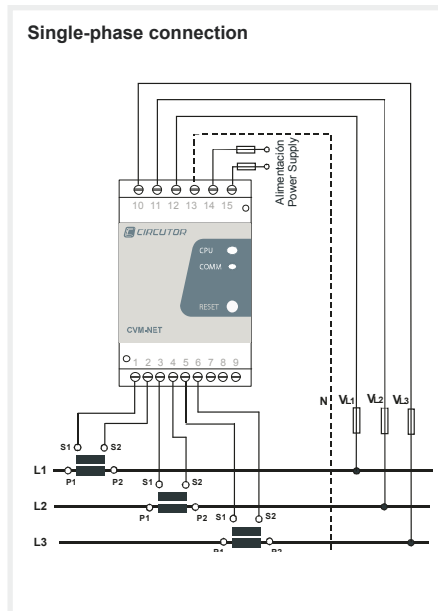
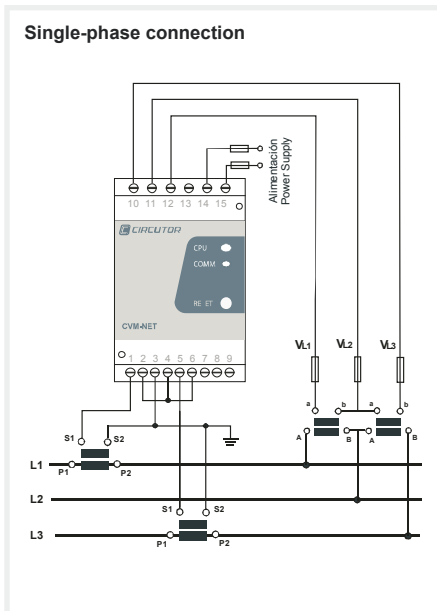
Three-phase power analyzer



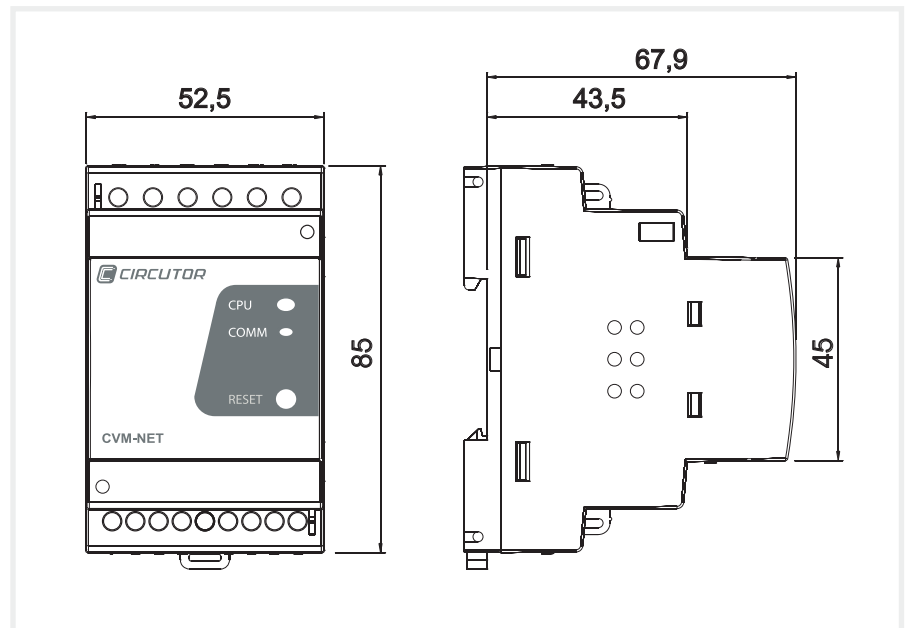
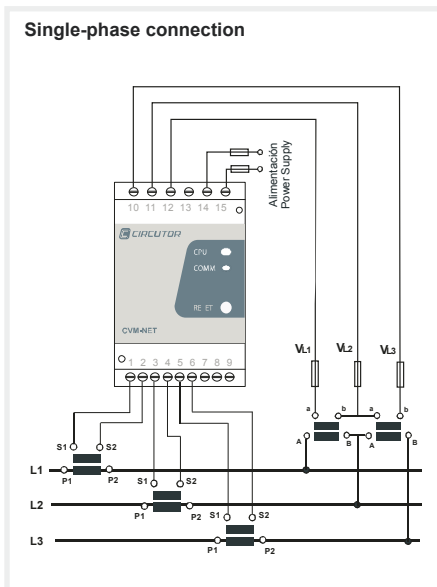
References

Quadrants	Communications Protocol MODBUS / RTU	Digital output	Measurement	Transformer type	Type	Code
4	RS-485	2	3 Phases	/ 5 A	CVM NET-ITF-RS-485-C2	M54B21
4	RS-485	2	3 Phases	/ 250 mA (type MC)	CVM NET-ITF-MC-RS-485-C2	M54B31

Connections *



Dimensions



* To see more connections, see CVM-MINI

CVM-NET-4

4 Three-phase power analyzers in one,
for DIN rail mounting - without display



Description

CVM-NET4-MC is a Power Analyzer used to measure balanced and unbalanced three-phase networks; specifically designed to take measurements from 4 different points of the installation. It has a single three-phase voltage input, with 4 three-phase channels for current signal inputs coming from the efficient **CIRCUTOR MC** transformers (see **M7** catalogue). The data acquired by the analyzer is transmitted via the RS-485 communications bus with the Modbus/RTU protocol to the supervision SCADA.

The main features are as follows:

- DIN rail format with only 6 modules
- Reads 4 current channels via efficient **MC-series** transformers (./250mA)
- RS-485 Communications (Modbus RTU)
- 4 Programmable digital outputs
- Compatible with **PowerStudio** / **PowerStudio SCADA** / **PowerStudio SCADA Deluxe** software.

Application

- Can take measurements from 4 points of the installation at the same time. Ideal for assembling on electrical control panels (compact size)
- Control of active and reactive energy via impulses.
- Ideal **EDS** accessory (see **M6**). This equipment measures the main parameters and the **EDS** manages them.

Features

Power circuit

Nominal voltage	85...365 V _{a.c.} / 95...300 V _{d.c.}
Power supply frequency	50-60 Hz (AC mode)
Maximum power consumption	6,0 V-A

Measurement circuit

Nominal voltage	300 V _{c.a.} / 520 V _{a.c.}
Frequency	45 ~ 65 Hz
Nominal current	I _n / 250 mA
Overload (permanent)	1,3 I _n

Communications

Network protocol	RS-485 (A / B / S)
Communications protocol	Modbus / RTU
Speed	9600 / 19200 / 38400 / 57600 bps
Length	8
Parity	No parity / even / odd
Bits of parity	1 / 2

Output transistors

Type: Isolated transistor	Open NPN collector
Maximum voltage of operation	24 V _{c.c.}
Maximum current of operation	50 mA
Maximum frequency	5 imp/s
Impulse duration	100 ms

Build features

Measure of module	Assembly on DIN rail 46277 (EN 50022)
Number of modules	6

Environmental conditions

Operating temperature	-10 ... +50 °C
Protection degree	IP 51
Humidity (without condensation)	5 ... 95% (without condensation)
Maximum altitude	3000 m

Safety

Type of insulation	EN 61010 double-insulated electric shock protection class II
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Standards

IEC 664, VDE 0110, UL 94, IEC 801, IEC 348, IEC 571-1, EN 61000-6-3, EN 61000-6-1, EN 61010-1, EN 61000-4-11, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN-61000-4-5, EN 55011, CE

CVM NET-4

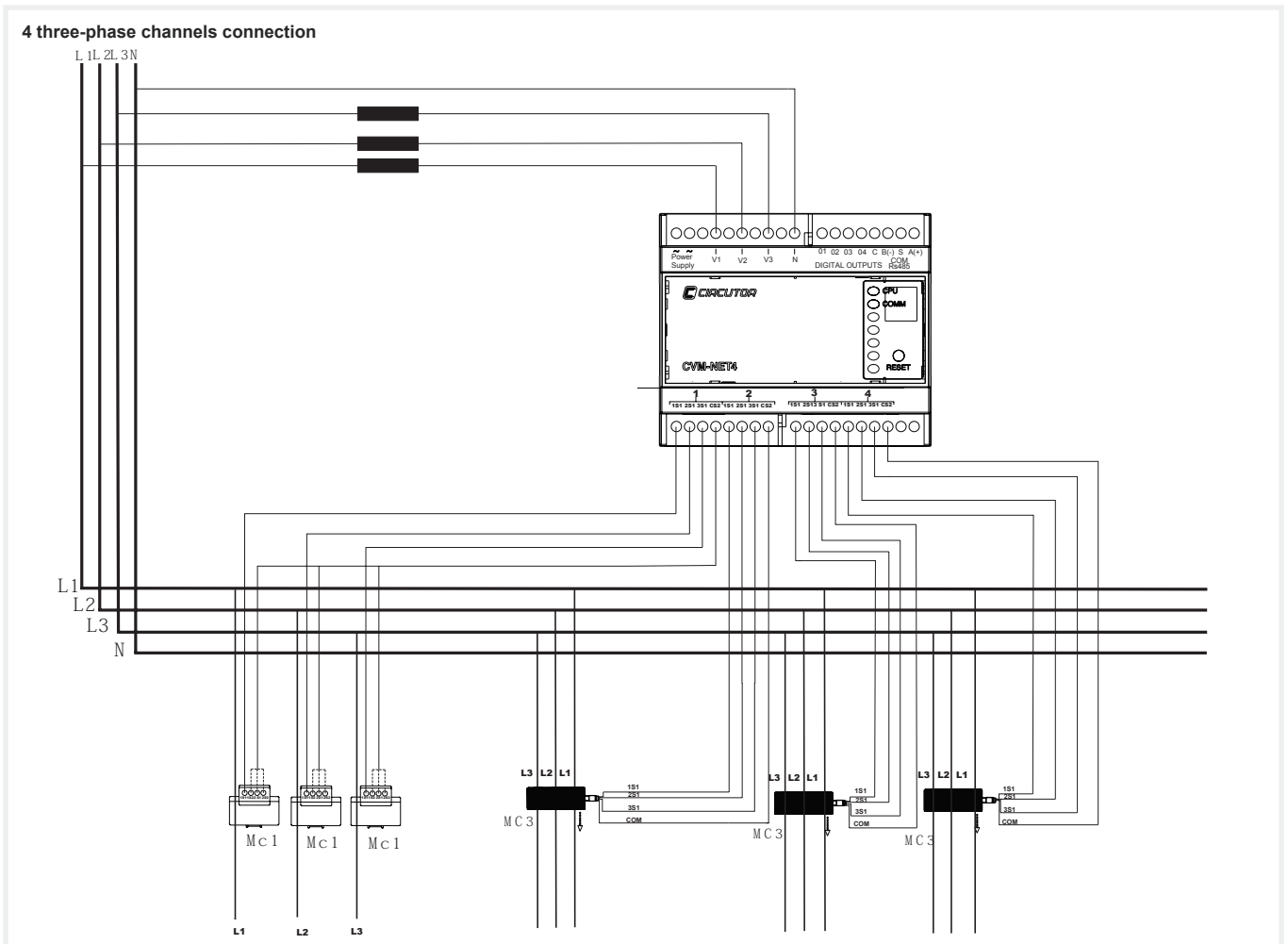
Three-phase power analyzer



References

Quadrants	Communications Protocol MODBUS / RTU	Digital output	Measurement	Transformer type	Type	Code
4	RS-485	4	4 three-phase channels	./ 250 mA (type MC)	CVM-NET4-MC-RS-485-C4 M	M55732

Connections



Dimensions

